

WHAT IS CLAIMED IS:

1. A method of modifying low frequency components of a digital audio signal having left and right channel signals, the method comprising the steps of: a) filtering the left and right channels signals using respective left and right high-pass filters to form left and right high-pass filtered signals; b) filtering the left and right channel signals using respective left and right band-pass filters to form left and right low frequency signals; c) modifying the amplitude of the left and right low frequency signals to give modified left and right low frequency signals whereby signals with amplitude a where $0 < a < a_1$ are amplified by a first constant value C_1 , signals with amplitude $a_1 \leq a < a_2$ are amplified proportional to $1/a$, signals with amplitude $a = 2a_2$ are unchanged, signals with amplitude $a_2 < a < a_3$ are attenuated proportional to $1/a$, and signals with amplitude $a = a_3$ are attenuated by a second constant value C_2 ; and d) combining the modified band-pass filtered left and right signals with the respective left and right high-pass filtered signals to form respective modified left and right channel audio signals.
2. A method according to claim 1 wherein in step c), the amplitude a of the signal is taken to be the amplitude of the left or right low frequency signal which has the largest absolute value.
3. A method according to claim 2 wherein the first constant value C_1 is 12.5.
4. A method according to claim 1 wherein the second constant value C_2 is 0.5.
5. A method according to claim 1 wherein $a_1 = 0.04$.
6. A method according to claim 1 wherein $a_2 = 0.5$.
7. A method according to claim 1 wherein $a_3 = 1$.
8. A method according to claim 1 wherein the digital audio signal is an MP3 encoded signal.

9. A method according to claim 1 wherein the digital audio signal is in WAV format.
10. A method according to claim 1 wherein the parameters of the band-pass filters are user selectable.
11. A method according to claim 1 wherein the parameters of the high-pass filters are user selectable.
12. A method claimed in claim 1 using a limiter having a transfer function substantially as shown in Figure 1d.
13. A digital signal produced using the method claimed in claim 1.